

Natural Resources Conservation Service

Colorado Basin Outlook Report June 1, 2005



Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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COLORADO WATER SUPPLY OUTLOOK REPORT JUNE 1, 2005

Summary

Winter abruptly ended during May, and in typical Colorado fashion, quickly jumped into summer-like conditions. Warm and dry weather during late May kicked snowmelt into high gear. Runoff is now well underway across the state, with many streams and rivers flowing above average. As the snowpack diminishes, streamflows are expected to drop accordingly. Southern basins are expected to recover from drought conditions as this winter's snowpack yields abundant runoff. Reservoir storage is expected to continue its gradual improvement across the state. This leaves Colorado with the best water supply conditions in nearly a decade.

Snowpack

Colorado's snowpack readings, as a percent of average, dropped from 99% on May 1 to 72% on June 1. Warm temperatures induced a near unabated melt throughout most of May. The rapid melt has left most of the state with below average totals for June 1. Only the Gunnison, Rio Grande and combined San Juan, Animas, Dolores, and San Miguel basins continue to report above average totals. As expected, those basins with well below average totals occur across northern Colorado. Snowpack percentages have dropped to nearly 50% of average in the South Platte and Yampa and White basins. While the current snowpack levels have dropped to well below average levels across most of the state, this year's totals remain several magnitudes greater than last year's readings on June 1. Statewide, this year's snowpack is over three times that of last year at this time, and all basins are reporting a much larger snowpack totals than a year ago. In terms of volume, the current statewide snowpack is averaging about 4.3 inches of water equivalent. Meanwhile, back on April 1, near the time of maximum accumulation, the statewide snowpack averaged about 15.6 inches of water equivalent. This translates into a loss of about 72% of the total, while in an average year the decrease is approximately 41% between these two dates. This spring's warm temperatures and rapid melting has nearly assured the state will reach melt out earlier than average. Given the current melt rates it seems reasonable that melt out might be 2 to 3 weeks earlier than average this year.

Precipitation

May was a dry month across Colorado. All basins reported below average totals for the month. Statewide, totals for May were 71% of average. Only across northwestern Colorado was near average precipitation measured during May. The Yampa and White basins reported the highest percent of average for the month at 95%. Elsewhere, totals for the month which ranged from 65% to 70% of average were common. Those basins include the Colorado, South Platte, Gunnison, and Arkansas. The driest basin totals for May was measured in the San Juan, Animas, Dolores, and San Miguel basins at only 54% of average. Water year totals range from a high of 132% of average in the Rio Grande basin to a low of only 85% of average in the South Platte basin. Statewide, water year totals for the eight months of the water year are at 100% of average.

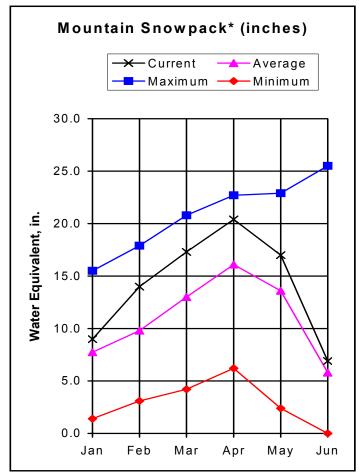
Reservoir Storage

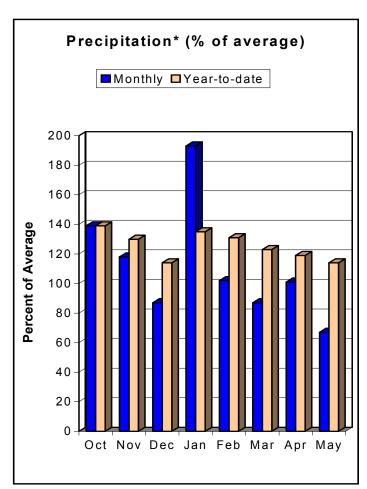
May's high runoff has significantly improved reservoir storage across most of the state. Storage in the Colorado River basin improved the most during May, with the addition of 174,000 acre feet into storage during the month. This basin's volumes are now 91% of average. Meanwhile, the Rio Grande basin's percent of average storage improved the most during May, rising from 56% of average on May 1, to 96% of average on June 1. Although statewide reservoir storage remains below average at 93%, this is the highest storage volume since September, 2001. Storage volumes are now slightly below average across most of the state. The only exceptions are the Arkansas basin, at 72% of average, and the San Juan, Animas, Dolores, and San Miguel basins, at 105% of average. Although the Arkansas basin continues to report the lowest percent of average volume, the current storage is the best since the spring of 2002. In comparison to last year's storage, the current volumes are well ahead of last year nearly statewide. In the Rio Grande basin, this year's storage is nearly two times that of last year at this time. Statewide, this year's volumes are 110% of last year's on this date.

Streamflow

The early snowmelt has produced high flows several weeks earlier than normal across most of the state. With the exception of those streams and rivers in southern Colorado, most of these are expected to drop back down to below average flows during June. Across southern Colorado, these flows are expected to remain above average for the remainder of the summer. Total seasonal volume forecasts continue to call for well above average volumes across southern Colorado. Also, those streams originating from the Grand Mesa are expected to produce well above average volumes. Streamflow volumes in the Gunnison basin and Arkansas headwaters are expected to be near average. Elsewhere, runoff volumes decrease to below average. Those basins with some of the lowest volume forecasts include the White, North Platte and South Platte. Volumes of only 50% to 75% of average are common in these basins.

GUNNISON RIVER BASIN as of June 1, 2005





June 1 measurements indicate snowpacks were 119 percent of average for this time of year in the Gunnison River Basin. These readings represent the best June 1 snowpack conditions in the basin since 1997. By comparison, these above average snowpacks contain over four times the amount of water present in last June's snowpack. SNOTEL data shows about 25 percent of this year's peak snowpack, which occurred on April 12, still remains in the mountains. While still more than double the amount of precipitation received during May 2004, mountain precipitation in the basin during May 2005 was well below average for the month at 67 percent of average. Despite the poor precipitation totals for May, total precipitation for the water year (since October 1, 2004) remains above average. At approximately 765,000 acre-feet, reservoir storage in the basin is 95 percent of average. This year's storage totals are 87 percent of the storage reported for the end of May 2004. Streamflow forecasts continue to call for near to above average runoff for most of the forecast points in the basin. Expected flows range from 74 percent of average for Tomichi Creek at Gunnison to 187 percent of average for Surface Creek at Cedaredge.

^{*}Based on selected stations

GUNNISON RIVER BASIN

Streamflow Forecasts - June 1, 2005

	 !					conditions ==				=======
Forecast Point		90% (1000AF)	70% (1000AF)	(1000AF)	Exceeding * = 50% (% AVG.)	30% (1000	AF) (10	0% 00AF)	30-Yr Avg. (1000AF)
Taylor River blw Taylor Park Resv	APR-JUL	72	82	=== ==== 	90	87			 111	103
Slate River nr Crested Butte	APR-JUL	78	86		91	102	9	8	107	89
East River at Almont	APR-JUL	158	177		192	100	20	7	232	192
Gunnison River nr Gunnison	APR-JUL	290	330		360	92	39	5	445	390
Tomichi Creek at Sargents	APR-JUL	21	24		27	84	3	0	36	32
Cochetopa Creek blw Rock Creek	APR-JUL	9.9	11.9		13.8	80	15.	9 1	9.5	17.3
Tomichi Creek at Gunnison	APR-JUL	42	52		60	74	7	0	87	81
Lake Fork at Gateview	APR-JUL	117	127	!	135	107	14	2	155	126
Blue Mesa Reservoir Inflow	APR-JUL	570	635	!	670	93	71	5	785	720
Paonia Reservoir Inflow	MAR-JUN APR-JUL	111 112	119 123		126 131	126 128	13 14		147 156	100 102
N.F. Gunnison River nr Somerset	APR-JUL	350	375		395	130	41	5	450	305
Surface Creek at Cedaredge	APR-JUL	27	30		32	187	3	4	36	17.1
Ridgway Reservoir Inflow	APR-JUL	95	104		110	108	11	7	128	102
Uncompangre River at Colona	APR-JUL	113	128		140	101	15	3	175	139
Gunnison River nr Grand Junction	APR-JUL	1450	1590	İ	1700	109 	183	0 2	030	1560
GUNNISON Reservoir Storage (100	RIVER BASIN 0 AF) - End	of May			 	GU Watershed Sn	NNISON RI owpack An	VER BASI alysis -	N June 1,	2005
	Usable	*** Usab	le Storag		I			umber	This Ye	ear as % of
Reservoir	Capacity 	Year	Last Year	Avg	İ	rshed		of a Sites	Last Y	_
BLUE MESA	830.0	471.3	564.1	517.1	1	R GUNNISON BA		9	477	130
CRAWFORD	14.3	13.0	11.4	12.6	SURF	ACE CREEK BAS	IN	2	424	183
FRUITGROWERS	4.3	4.5	4.3	4.0	UNCO	MPAHGRE BASIN		3	368	84
FRUITLAND	9.2	4.9	6.0	6.3	TOTA	L GUNNISON RI	VER BASI	12	456	119
MORROW POINT	121.0	109.4	112.4	113.8						

18.0 8.0 15.4 15.7

83.2 73.4 73.5 61.2

106.0 80.7

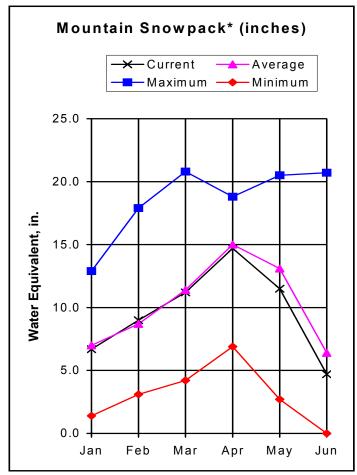
PAONIA

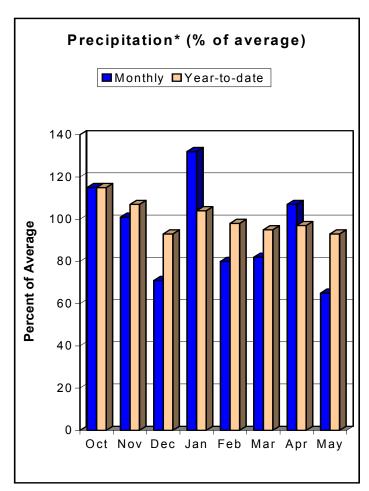
RIDGWAY TAYLOR PARK

^{* 90%, 70%, 50%, 30%,} and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

^{(1) -} The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER COLORADO RIVER BASIN as of June 1, 2005





Warm and dry conditions during May resulted in below average June 1 snowpacks in the Upper Colorado River Basin. Measurements show the basin snowpacks are currently 73 percent of average. However, this year's June measurements are still the best the basin has seen since 1999 and are more than three times the snowpack measured last year at this time. SNOTEL data indicates that, as of June 1, approximately 20 percent of this year's peak snowpack (measured on April 13) remains. At 65 percent of average, May precipitation in the basin was well below average. As a result, total precipitation since October 1, 2004 fell a little further behind to 93% of average. Still, this year's totals are 121 percent of the totals reported at this time last year. Reservoir storage in the basin is also up (106 percent) when compared to the figures reported last year. However, at 91 percent of average, the storage in the basin is still slightly below the long-term average. Below average runoff volumes are forecast throughout the basin. Streamflows are expected to range from a low of 62 percent of average for Muddy Creek below Wolford Mountain Reservoir to a high of 95 percent of average for Roaring Fork at Glenwood Springs.

^{*}Based on selected stations

UPPER COLORADO RIVER BASIN

UPPER COLORADO RIVER BASIN Streamflow Forecasts - June 1, 2005

		<<=====	= Drier ==	====	Future Co	nditions ==	===== Wette	er ====	=>>	
Forecast Point	Forecast Period	======= 90% (1000AF)	70% (1000AF)	1		0% 1	30% (1000AF)	10 (100)%	30-Yr Avg. (1000AF)
Lake Granby Inflow	APR-JUL	162	178		190	84	205		25	225
Willow Creek Reservoir Inflow	APR-JUL	41	44		47	92	50		55	51
Williams Fork Reservoir inflow	APR-JUL	66	77		85	90	94	1	.10	95
Dillon Reservoir Inflow	APR-JUL	104	115		125	75	135	1	.50	167
Green Mountain Reservoir inflow	APR-JUL	190	210		225	80	240	2	265	280
Muddy Creek blw Wolford Mtn. Resv.	APR-JUL	29	34		37	62	41		47	60
Eagle River blw Gypsum	APR-JUL	220	240		260	78	280	3	310	335
Colorado River nr Dotsero	APR-JUL	905	1020		1100	76	1200	13	340	1440
Ruedi Reservoir Inflow	APR-JUL	86	99		110	78	121	1	.41	141
Roaring Fork at Glenwood Springs	APR-JUL	557	631		675	95	729	8	803	710
Colorado River nr Cameo	APR-JUL	1620	1840		2000	83	2180	24	140	2420
UPPER COLORA Reservoir Storage (100	0 AF) - End	of May				Watershed Sr	R COLORADO RI nowpack Analy	/sis -	June 1,	
Reservoir	Usable Capacity		le Storage Last		 Water		Numb	er	This Y	ear as % of
reservoir	Capacity	Year	Year	Avg			Data S	Sites	Last Y	
DILLON	250.8	226.3		229.0	1	RIVER BASIN	Ę		130	28
LAKE GRANBY	465.6	186.2	178.5	302.9	UPPER	COLORADO RI	IVER BASI 19)	237	45
GREEN MOUNTAIN	139.0	91.6	82.3	76.1	MUDDY	CREEK BASIN	1 2	2	0	0

43.0 19.9 21.8 20.3 | PLATEAU CREEK BASIN

102.0 86.2 74.4 74.2 ROARING FORK BASIN

32.0 33.7 33.7 29.2 | WILLIAMS FORK BASIN

96.8 78.8 72.8 63.6 | WILLOW CREEK BASIN

6.4 7.4 TOTAL COLORADO RIVER BASI 28

2 424

587

0

0

332

97

64

7

2

2

The average is computed for the 1971-2000 base period.

HOMESTAKE

WILLIAMS FORK

WILLOW CREEK

RUEDI

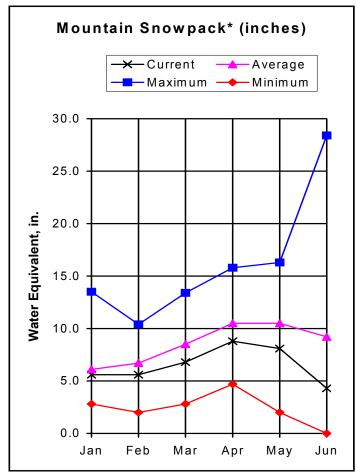
VEGA

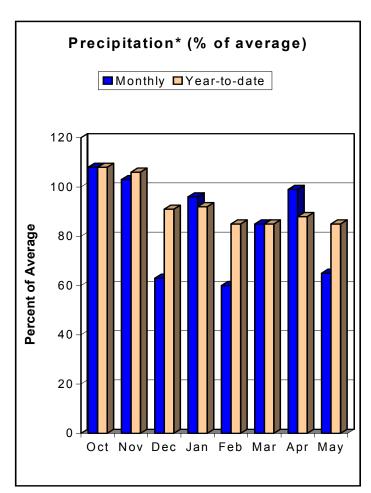
9.0 8.1

^{* 90%, 70%, 50%, 30%,} and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

^{(1) -} The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels. (2) - The value is natural volume - actual volume may be affected by upstream water management.

SOUTH PLATTE RIVER BASIN as of June 1, 2005





Snowpacks in the South Platte River basin were measured at only 47 percent of average on June 1. Although well below average, this year's snowpacks are just under four times those reported a year ago. In addition, this is the second best June 1 snowpack in the basin since 1999 (behind June 2003 when snowpacks were measured at 58 percent of average). Late spring snowfall resulted in a second, higher snowpack peak occurring on May 4. Since then, there has been some significant melting of the snowpack due to very warm and dry conditions. SNOTEL data indicates that about 22 percent of the peak snowpack measured earlier in the month still remains at this time. Mountain precipitation during May was well below average (65 percent of average) for the basin. The relatively low monthly precipitation resulted in a drop in the total water year-to-date precipitation to 85 percent of average. Reservoir storage is just below average at 99 percent of average for the basin. This is a 29 percent increase over the storage reported last year at this time. Spring and summer streamflows are forecast to be below to well below average throughout the entire basin. Runoff volumes are expected to range from a low of 49 percent of average for Bear Creek at Morrison (June-July) to a high of 94 percent of average for South Boulder near Eldorado Springs.

^{*}Based on selected stations

SOUTH PLATTE RIVER BASIN

Streamflow Forecasts - June 1, 2005

	=======	======== <<====== 	Drier ====	== Future Co	nditions =	====== Wetter	:=====>> :====>>	=======
Forecast Point	Forecast	 =======		= Chance Of E	xceeding *			
	Period	90% (1000AF)	70% (1000AF)		0% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Antero Reservoir inflow	JUN-JUL	2.8	4.3	========= 5.9	51	8.0	12.6	11.5
	JUN-SEP	3.2	5.4	7.7	50	10.9	18.3	15.4
Spinney Mountain Reservoir inflow	JUN-JUL	7.6	13.3	19.4	50	28	49	39
	JUN-SEP	10.1	18.2	1 27	52	40	72	52
Elevenmile Canyon Reservoir inflow	JUN-JUL	9.0	14.9	21	51	30	49	41
	JUN-SEP	10.7	19.4	29	54	43	79	54
Cheesman Lake inflow	JUN-JUL	17.9	29	40	56	55	90	72
	JUN-SEP	25	41	58	59	82	134	99
South Platte River at South Platte	JUN-JUL	43	66	89	72	120	186	124
	JUN-SEP	62	96	129	75	173	268	172
Bear Creek abv Evergreen	JUN-JUL	3.4	4.8	6.0	58	7.6	10.7	10.4
	JUN-SEP	5.5	7.8	9.9	62	12.5	17.7	16.0
Bear Creek at Morrison	JUN-JUL	3.0	4.5	5.8	49	7.5	11.0	11.9
	JUN-SEP	5.3	7.8	10.1	57	13.1	19.1	17.7
Clear Creek at Golden	APR-JUL	66	77	85	77	93	104	110
	APR-SEP	80	93	102	76	111	124	134
St. Vrain Creek at Lyons	APR-JUL	50	61	68	74	75	86	92
	APR-SEP	60	72	80	75	88	100	107
Boulder Creek nr Orodell	APR-JUL	35	39	42	91	45	49	46
	APR-SEP	42	45	48	91	51	54	53
South Boulder nr Eldorado Spgs	APR-JUL	29	35	39	94	43	49	41
	APR-SEP	32	39	43	94	47	54	46
Big Thompson River at mouth nr Drake	APR-JUL	61	71	78	80	85	95	98
	APR-SEP	75	87	95	81	103	115	117
CACHE LaPOUDRE at Canyon Mouth	APR-JUL	163	195	220	90	245	275	245
	APR-SEP	180	220	245	89	270	310	275
SOUTH PLATTE	RIVER BAS	======= TN	=======	 	SOU	======== TH PLATTE RIVE	EEEEEEEEEEEE	:=======

Reservoir		
ANTERO 20.0 3.0 1.0 16.0 BIG THOMPSON BASIN 3 1786 BARR LAKE 32.0 30.0 20.0 27.7 BOULDER CREEK BASIN 3 175 BLACK HOLLOW 8.0 3.9 2.7 4.4 CACHE LA POUDRE BASIN 2 254 BOYD LAKE 49.0 47.1 27.2 40.0 CLEAR CREEK BASIN 1 0 CARTER 108.9 89.2 75.2 9.1 SAINT VRAIN BASIN 1 0 CARTER 108.9 89.2 75.2 100.2 UPPER SOUTH PLATTE BASIN 6 0 CHAMBERS LAKE 9.0 6.9 3.5 5.8 TOTAL SOUTH PLATTE BASIN 17 368 CHEESMAN 79.0 79.7 66.6 66.2 COBB LAKE 34.0 3.8 5.0 14.7 ELEVEN MILE 97.8 99.1 79.4 97.1 EMPIRE 38.0 28.7 14.9 30.7 FOSSIL CREEK 12.0 10.7 6.0 8.0 GROSS 41.8 39.0 22.2 28.8 HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6	This Year as % of	
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CHEESMAN 79.0 79.7 66.6 66.2 COBB LAKE 34.0 3.8 5.0 14.7 ELEVEN MILE 97.8 99.1 79.4 97.1 EMPIRE 38.0 28.7 14.9 30.7 FOSSIL CREEK 12.0 10.7 6.0 8.0 GROSS 41.8 39.0 22.2 28.8 HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6	0	
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ELEVEN MILE 97.8 99.1 79.4 97.1 EMPIRE 38.0 28.7 14.9 30.7 FOSSIL CREEK 12.0 10.7 6.0 8.0 GROSS 41.8 39.0 22.2 28.8 HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
EMPIRE 38.0 28.7 14.9 30.7 FOSSIL CREEK 12.0 10.7 6.0 8.0 GROSS 41.8 39.0 22.2 28.8 HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
FOSSIL CREEK 12.0 10.7 6.0 8.0 GROSS 41.8 39.0 22.2 28.8 HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
GROSS 41.8 39.0 22.2 28.8 HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
HALLIGAN 6.4 6.4 6.2 6.0 HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
HORSECREEK 16.0 13.2 0.0 14.1 HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
HORSETOOTH 149.7 131.3 138.3 123.2 JACKSON 35.0 25.6 22.2 30.6		
JACKSON 35.0 25.6 22.2 30.6		
JULESBURG 28.0 18.4 17.5 21.5		
LAKE LOVELAND 14.0 12.3 12.1 11.0		
LONE TREE 9.0 8.8 8.9 8.6		
MARIANO 6.0 5.6 2.3 5.4		
MARSHALL 10.0 9.6 8.2 8.2		
MARSTON 13.0 12.9 5.2 15.3		
MILTON 24.0 20.9 18.0 19.3		
POINT OF ROCKS 70.0 65.1 45.0 66.3		

26.7 56.0

36.8 7.0 12.2

6.7 34.3 20.9

41.2

The average is computed for the 1971-2000 base period.

PREWITT RIVERSIDE

STANDLEY TERRY LAKE

UNION

SPINNEY MOUNTAIN

23.2 52.6

41.2 7.0 12.6

28.2 63.1

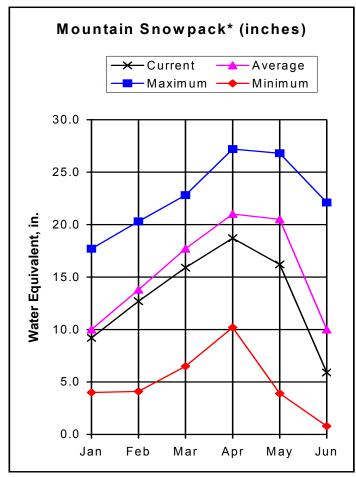
48.7

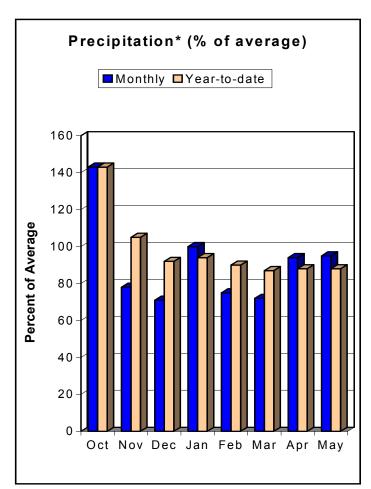
42.0

WINDSOR 19.0 12.2 9.3 15.0 | * 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of June 1, 2005





Snowpacks in the Yampa, White, North Platte and Laramie River basins are mostly well below average at 59 percent of average, overall. The best snowpack conditions can be found in the White River Basin and the Little Snake River Basin with snowpack percentages of 74 percent of average and 79 percent of average, respectively. Despite the relatively low numbers, these are the best June 1 snowpack conditions the basins have experienced since 1999 and are almost four times higher than those reported last June. SNOTEL data shows that 34 percent of the annual peak snowpack remains in the Laramie and North Platte basins, primarily due to an extension of the accumulation season into mid-May by late season snowstorms. The Yampa and White basins have 22 percent of the annual peak snowpack remaining. At 95 percent of average, May precipitation in the combined basins was the best in the state. Precipitation totals since October 1, 2004 remain below average at 88 percent of average. By comparison, this year's precipitation totals are 109 percent of the total precipitation reported a year ago. Reservoir storage is slightly below average at 96 percent of average. This is a slight (2 percent) increase over last year's storage at this time. April-July streamflow volumes are expected to be mostly below average throughout the basins ranging from 52 percent of average for the Yampa River above Stagecoach Reservoir to 127 percent of average for Elkhead Creek below Maynard Gulch.

^{*}Based on selected stations

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS Streamflow Forecasts - June 1, 2005

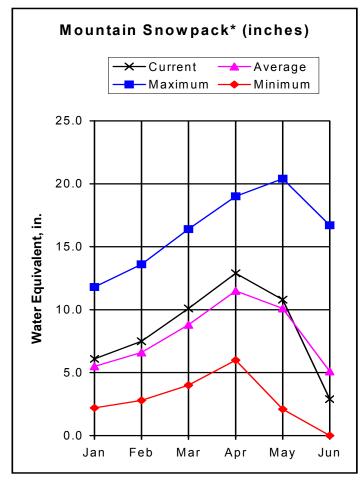
	 ا	<pre><<===== Drier ===== Future Conditions ====== Wetter ====>> </pre>								:=======	
Forecast Point	Forecast	=======	-=======	= Cha	ance Of E	Exceeding * =	=======	:======	 =====		
	Period	90% (1000AF)	70% (1000AF)	1	5 (1000AF)	0% (% AVG.)	309 (1000) AF) (1	10% 000AF)	(1000AF)	
NORTH PLATTE RIVER nr Northgate	JUN-JUL JUN-SEP	64 72	77 92		86 105	65 66	1	96	111 138	133 159	
LARAMIE RIVER nr Woods	JUN-JUL JUN-SEP	20 24	42 48		55 64	71 72	 	70 30	92 104	77 89	
Yampa R abv Stagecoach Res	APR-JUL	11.9	13.6		15.0	52	 16.	. 5	18.9	29	
Yampa River at Steamboat Springs	APR-JUL	165	182		195	70	 21	.0	230	280	
Elk River nr Milner	APR-JUL	365	390	1	405	125	 42	20	450	325	
Elkhead Creek nr Elkhead	APR-JUL	39	41	1	42	108	 	15	48	39	
ELKHEAD CREEK blw Maynard Gulch	APR-JUL	71	73	1	75	127	 	17	81	59	
Fortification Ck nr Fortification	MAR-JUN	5.50	6.50	1	6.70	89	 6.9	90	7.30	7.50	
Yampa River nr Maybell	APR-JUL	785	840	1	880	89	 93	30	1000	990	
Little Snake River nr Slater	APR-JUL	122	137	 	146	92	 15	57	176	159	
LITTLE SNAKE R nr Dixon	APR-JUL	245	275	 	300	91	 33	30	380	330	
LITTLE SNAKE R nr Lily	APR-JUL	270	300		320	88	 34	15	385	365	
White River nr Meeker	APR-JUL	185	205	 	225	78	 24	14	274	290	
YAMPA, WHITE, AND NO Reservoir Storage (100	RTH PLATTE F 0 AF) - End	RIVER BASIN	NS		Y	AMPA, WHITE, Watershed Si	, AND NORT	TH PLATT	E RIVER - June 1	BASINS , 2005	
	Usable	*** Usabl	le Storage '	**	I			Number	This	Year as % of	
Reservoir		Year		Avg	İ				Last	Yr Average	
STAGECOACH	33.3	29.2		29.9		IIE RIVER BAS		2	195	47	
YAMCOLO	9.1	6.3	7.0	7.7	 NORTH	I PLATTE RIVI	ER BASIN	7	156	68	
					 TOTAL	NORTH PLAT	TE BASIN	9	160	64	
					 ELK R	RIVER BASIN		2	0	17	
					 YAMPA	RIVER BASI	N	9	146	45	
					 WHITE	RIVER BASII	N	4	143	74	
					 TOTAL	YAMPA AND N	WHITE RIV	12	143	52	
					 LITTL	E SNAKE RIVI	ER BASIN	6	164	79	
					 TOTAL	YAMPA, WHI	TE AND NO	24	161	59	

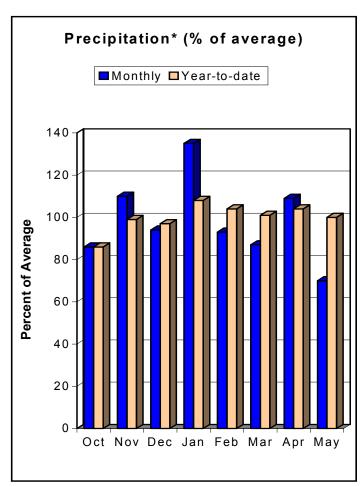
______ * 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

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ARKANSAS RIVER BASIN as of June 1, 2005





Based on data from six SNOTEL sites, snowpack levels in the Arkansas River basin have dipped below average for June 1. The limited data suggests that the remaining snowpack in the Arkansas basin is at 57% of average, still about two and a half times the amount of snow present at this time last year. After what looked to be the start of an early runoff in mid April, some late April storms helped boost snowpack to a secondary peak early in May, when runoff really began. About 80% of the snowpack contained in this secondary peak was lost to runoff during the month of May. Precipitation for the month of May was 70% of average, dropping the year to date precipitation to 100% of average, down from 104% last month. Reservoir storage on the Arkansas is at 72% of average, down slightly from 75% of average last month, but still 129% of the storage for last year at this time. April through September streamflow volume is still expected to be considerably higher in the southern portions of the basin. The Cucharas River near La Veta is expected to run at 192% of its average flow and the inflow to Trinidad Lake should see 177% of its average. Streamflow in the Upper Arkansas does not look quite as impressive as the rest of the basin. Expect flows to be about 90% of average on the Arkansas at Salida and about 85% of average on Chalk Creek near Nathrop.

^{*}Based on selected stations

ARKANSAS RIVER BASIN

ARKANSAS RIVER BASIN Streamflow Forecasts - June 1, 2005

	<<===== Drier ===== Future Conditions ====== Wetter ====>>									
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	01141100 01 1	Exceeding * = 50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)		
Chalk Creek nr Nathrop	APR-SEP	15.4	19.7	23	85	27	33	27		
Arkansas River at Salida	APR-SEP	215	255	280	90	310	355	310		
Grape Creek nr Westcliffe	APR-SEP	16.5	21	25	128	29	36	19.6		
Pueblo Reservoir Inflow	APR-SEP	315	365	405	94	445	510	430		
Huerfano River nr Redwing	APR-SEP	18.3	21	23	148	25	29	15.5		
Cucharas River nr La Veta	APR-SEP	21	24	25	192	27	29	13.0		
Trinidad Lake Inflow	APR-SEP	63	72	 78 	177 	86	97	44		

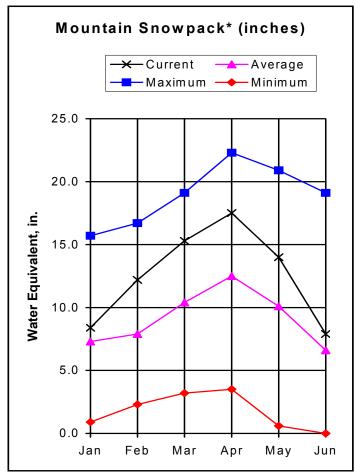
ARKANS Reservoir Storage	SAS RIVER BASIN (1000 AF) - End	of May			ARKANSA Watershed Snowpac	S RIVER BASI k Analysis -		005
Reservoir	Usable Capacity	*** Usa This	able Stora Last		Watershed	Number of		r as % of
	I	Year	Year	Avg		Data Sites	Last Yr	Average
ADOBE	70.0	0.0	0.0	33.0	UPPER ARKANSAS BASIN	3	142	41
CLEAR CREEK	11.0	10.5	8.3	6.3	CUCHARAS & HUERFANO RI	VER 2	0	124
GREAT PLAINS	150.0	0.0	0.0	39.3	PURGATOIRE RIVER BASIN	2	0	0
HOLBROOK	7.0	1.0	0.0	4.1	TOTAL ARKANSAS RIVER B	ASI 6	245	57
HORSE CREEK	28.0	0.0	11.5	10.0				
JOHN MARTIN	335.7	51.2	6.6	128.1				
LAKE HENRY	8.0	7.5	5.1	5.7				
MEREDITH	42.0	37.0	17.7	18.5				
PUEBLO	236.7	126.4	100.2	160.1				
TRINIDAD	72.3	31.6	29.6	29.7				
TURQUOISE	126.6	76.0	81.1	77.6				
TWIN LAKES	86.0	59.2	51.4	42.6				

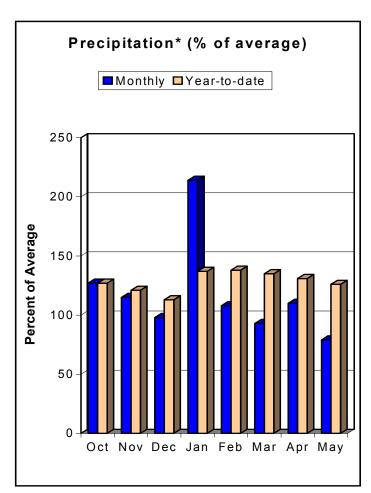
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UPPER RIO GRANDE RIVER BASIN as of June 1, 2005





As runoff continues, the impressive snowpack of the Upper Rio Grande basin slowly decreases towards its 30 year average. Based on ten SNOTEL sites, the snowpack in the Upper Rio Grande sits at 119% of average on June 1, still over three times the snow present at this time last year. A sharp decrease in snowpack during mid April led to a series of storms and a minor recovery of the snowpack early in May. The month of May saw about a 70% decrease in snowpack due to runoff. Precipitation during the month did little to help the dropping snowpack as precipitation was only 79% of average for May, dropping the year to date precipitation to 126% of average, down from 131% last month. Reservoir storage is at 96% of average and 35% of capacity, up considerably from last month. April through September flows on the Rio Grande should push 150% of average at all forecast points. Expect the Rio Grande at Thirty Mile Bridge, Wagon Wheel Gap, and Del Norte to show 145 to 148% of average flow. The South Fork at South Fork should also run about 148% of average and inflow to Platoro Reservoir should be about 128% of average.

^{*}Based on selected stations

UPPER RIO GRANDE BASIN

Streamflow Forecasts - June 1, 2005

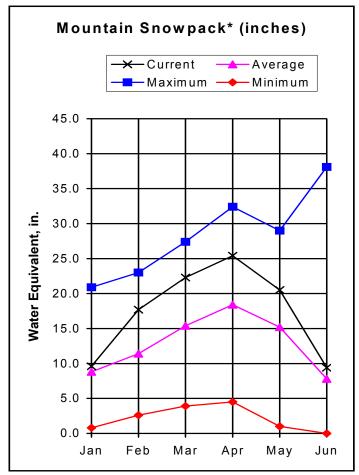
	.=======	Streamiliov					=======			========
		<<===== Drier ===== Future Conditions ====== Wetter ====>>								
Forecast Point	Forecast									
		90% (1000AF)			(1000AF)	0% (% AVG.)	(1000AF	10%) (1000 <i>I</i>	AF)	
Rio Grande at Thirty Mile Bridge	APR-SEP	165	186	:== ===: 	205	151	220	250		136
Rio Grande Reservoir Inflow	APR-JUL	156	168		177	150	186	200)	118
Rio Grande at Wagon Wheel Gap	APR-SEP	420	475		515	149	560	635	5	345
South Fork Rio Grande at South Fork	APR-SEP	173	191	-	205	155	220	245	5	132
Rio Grande nr Del Norte	APR-SEP	680	750		795	150	845	925	5	531
Saguache Creek nr Saguache	APR-SEP	26	31	į	35	106	39	47	7	33
Alamosa Creek abv Terrace Reservoir	APR-SEP	85	94	į	100	143	107	118	3	70
La Jara Creek nr Capulin	MAR-JUL	10.00	10.70	į	11.30	130	11.90	13.00)	8.70
Trinchera Creek	APR-SEP	15.6	18.1	į	20	167	22	26	5	12.0
Sangre de Cristo Creek	APR-SEP	12.80	14.40	į	16.00	182	18.00	22.00)	8.80
Ute Creek	APR-SEP	15.7	18.5	į	20	164	23	28	3	12.2
Platoro Reservoir Inflow	APR-JUL APR-SEP	64 79	71 87		85 93	133 131	83 99	92 109		64 71
Conejos River nr Mogote	APR-SEP	240	265	į	280	140	300	325	5	200
San Antonio River at Ortiz	APR-SEP	22	22	į	23	140	23	24	1	16.4
Los Pinos River nr Ortiz	APR-SEP	101	106	į	110	149	113	119)	74
Culebra Creek at San Luis	APR-SEP	33	37	į	41	178	45	53	3	23
Costilla Reservoir inflow	MAR-JUL	14.4	16.1	į	17.5	165	18.9	21	_	10.6
Costilla Creek nr Costilla	MAR-JUL	40	44	į	46	177	48	52	2	26
UPPER RIO 0 Reservoir Storage (1000	GRANDE BASII AF) - End	N of May			 	UPP Watershed Sn	ER RIO GRAN owpack Anal	DE BASIN ysis - Ju	ine 1,	2005
		*** Usabl				=======	Num			======= ar as % of
Reservoir	Capacity		Last Year	Avg	Water	shed	o Data		Last Yr	Average
CONTINENTAL	15.0	4.9	6.1	8.2	1	======= SA CREEK BAS		======= 1	0	0
PLATORO	53.7	20.1	8.5	24.5	 CONEJ	OS & RIO SAN	ANTONIO	2	0	125
RIO GRANDE	51.0	27.2	9.4	24.2	CULEB	RA & TRINCHE	RA CREEK	3	0	0
SANCHEZ	103.0	23.3	16.5	26.9	UPPER	RIO GRANDE	BASIN	4 2	288	119
SANTA MARIA	45.0	12.8	3.6	11.4	 TOTAL	UPPER RIO G	RANDE BA 1	0 3	320	119
TERRACE	13.1	11.2	6.6	8.0	1					
					l					

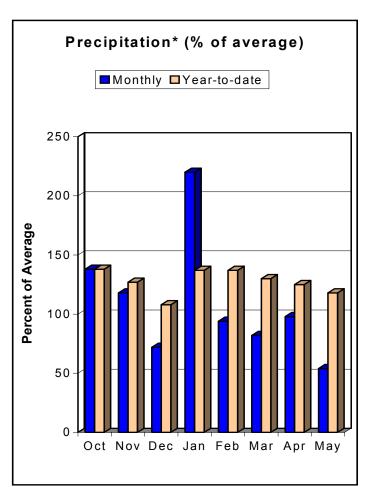
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SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of June 1, 2005





Overall, snowpacks in the combined San Miguel, Dolores, Animas and San Juan River basins are well above average for this time of year at 121 percent of average. However, it should be noted that none of the SNOTEL sites in the Dolores and San Miguel basins reported any snow at the sites. Conversely, the Animas River Basin snowpacks are measuring at 97 percent of average and the San Juan River Basin snowpacks are at 176 percent of average. June 1 snowpack conditions in the combined basins are the best they have been since 1995. SNOTEL data indicates that about 30 percent of the annual peak snowpack remains. May precipitation was the lowest monthly percentage in the state at only 54 percent of average. Even with May's poor performance, total precipitation since October 1 remains above average at 118 percent of average. This year's precipitation totals are 34 percent higher when compared to last year's totals for this same time. Reservoir storage is 105 percent of average and 107 percent of the storage reported a year ago. Streamflow forecasts indicate April-July volumes should be above average to well above average. Forecasts range from 106 percent of average for the San Miguel River near Placerville to 180 percent of average for the La Plata River at Hesperus.

^{*}Based on selected stations

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS

Streamflow Forecasts - June 1, 2005

		<<=====	Drier ===	==== Wette					
Forecast Point	Forecast			== Cha			i		
	Period	90% (1000AF)	70% (1000AF)	ļ	5 (1000AF)	0% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
======================================	APR-JUL	300	325	:= ===: 	340	128	360	390	265
McPhee Reservoir inflow	APR-JUL	405	425	-	440	138	460	485	320
San Miguel River nr Placerville	APR-JUL	116	129	-	140	106	150	169	132
Gurley Reservoir Inlet	JUN-JUL JUNE JULY	4.80	5.90		6.60 5.20 1.40	110 111 106	7.30	8.40	6.00 4.67 1.32
Cone Reservoir Inlet	JUN-JUL JUNE JULY	0.75	1.21		1.53 1.20 0.33	107 115 87	1.85	2.30	1.43 1.04 0.38
Lilylands Reservoir Inlet	JUN-JUL JUNE JULY	0.91	1.15	 	1.31 1.00 0.31	115 115 115	1.47	1.71	1.14 0.87 0.27
Rio Blanco at Blanco Diversion	APR-JUL	68	73	-	75	142	82	89	53
Navajo River at Oso Diversion	APR-JUL	88	95		100	145	106	115	69
San Juan River nr Carracus	APR-JUL	565	610	-	640	158	675	730	405
Piedra River nr Arboles	APR-JUL	355	380	-	395	172	410	440	230
Vallecito Reservoir Inflow	APR-JUL	305	325	į	345	168	365	395	205
Navajo Reservoir Inflow	APR-JUL	1220	1320	į	1400	175	1490	1630	800
Animas River at Durango	APR-JUL	595	635	į	670	152	705	760	440
Lemon Reservoir Inflow	APR-JUL	84	93	į	100	172	108	121	58
La Plata River at Hesperus	APR-JUL	39	42	į	45	180	48	53	25
Mancos River nr Mancos	APR-JUL JUNE JULY	48	55	 	60 20 5.50	150 146 120	67	78	40 13.7 4.60
SAN MIGUEL, DOLORES, ANII Reservoir Storage (1	MAS, AND SAN (of May				GUEL, DOLORES, Watershed Sno	wpack Analy	sis - June	1, 2005
Reservoir	Usable Capacity	*** Usabl This	e Storage Last	***	 Water	shed	Numbe		s Year as % of
======================================	1	Year	Year .	Avg			Data S	ites Las	t Yr Average
GROUNDHOG	21.7	13.7		18.9		S RIVER BASIN	7		
JACKSON GULCH	10.0	10.0	10.0	9.3	DOLOR	RES RIVER BASI	N 4	C	0
LEMON	40.0	27.1	34.5	29.2	SAN M	MIGUEL RIVER B	ASIN 3	C	0

126.0 78.8 118.0 93.9 AN JUAN RIVER BASINS

381.2 373.0 295.4 328.0 | SAN JUAN RIVER BASIN 3

19.0 17.0 14.3 17.4 | TOTAL SAN MIGUEL, DOLORES 16 457 121

365

176

The average is computed for the 1971-2000 base period.

MCPHEE

NARRAGUINNEP

VALLECITO

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655 Parfet Street, Room E200C Lakewood, CO 80215-5517

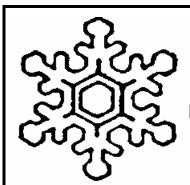
In addition to the basin outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, January through May. The information may be obtained from the National Resources Conservation Service web page at http://www.wcc.nrcs.usda.gov/wsf/westwide.html.

Issued by

Bruce Knight
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

Allen Green State Conservationist Natural Resources Conservation Service Lakewood, Colorado



Colorado Basin Outlook Report

Natural Resources Conservation Service Lakewood, CO

